Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Ensuring Customer Premises Equipment Backup	)	PS Docket No. 14-174
	)	
Technology Transitions	)	GN Docket No. 13-5

COMMENTS OF THE NATIONAL CABLE & TELECOMMUNICATIONS ASSOCIATION

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The National Cable & Telecommunications Association (NCTA) appreciates the Commission's interest in how best to ensure that consumers are able to make voice calls during a commercial power outage, but we oppose the Commission's proposal to place primary responsibility for the powering of customer premises equipment (CPE) on providers of Voice over Internet Protocol (VoIP) services.[1] Consumer expectations with respect to landline phones have changed significantly over the last decade. Consumers are choosing VoIP technology with full awareness of its advantages and limitations. Although cable operators make substantial efforts to provide reliable service and offer customers options for backup power capability, consumers should have control over how best to address their needs and not be forced to bear the significant expense of a battery backup mandate.

INTRODUCTION AND SUMMARY

Modern Internet Protocol (IP) networks and services rely on fiber and hybrid fiber coax (HFC) facilities that are not powered from a central office and therefore depend on commercial power for normal operations. Although fiber and HFC facilities offer many benefits over legacy copper facilities for communications services, including the ability to offer faster speeds over

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[1] *Ensuring Customer Premises Equipment Backup Power for Continuity of Communications*, PS Docket No. 14-174, Notice of Proposed Rulemaking and Declaratory Ruling, FCC 14-185 (rel. Nov. 25, 2014) ("*Notice*").

longer distances, they cannot conduct electricity and therefore cannot provide the separate source of power for equipment in the home that copper lines have provided in the past. Accordingly, over a decade ago the Commission required VoIP providers to inform every customer that service, including access to E911, may not be available during a power outage.[2] With these disclosure rules in place, tens of millions of American consumers voluntarily have switched to VoIP services.

As part of the ongoing transition of communications networks to IP technology, the Commission states that "it is important that lines of responsibility for provisioning CPE backup power are clearly delineated and understood by providers and consumers alike, so that performance can meet expectations and continuity of communications can be ensured."[3] In particular, the *Notice* solicits comment on the possible adoption of "baseline requirements for ensuring continuity of power for CPE during commercial power outages,"[4] including a proposal that "providers should assume responsibility for provisioning backup power that is capable of powering their customers' CPE during the first eight hours of an outage."[5]

NCTA opposes the Commission's proposal to make VoIP providers responsible for powering CPE.[6] The Commission's consideration of these issues should reflect the reality of

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2 *IP-Enabled Services; E911 Requirements for IP-Enabled Service Providers*, WC Docket Nos. 04-36 and 05-196, First Report and Order and Notice of Proposed Rulemaking, 20 FCC Rcd 10245, 10272-73, ¶ 48 (2005) ("[I]nterconnected VoIP service providers shall distribute to all subscribers, both new and existing, warning stickers or other appropriate labels warning subscribers if E911 service may be limited or not available and instructing the subscriber to place them on and/or near the CPE used in conjunction with the interconnected VoIP service.").

3 *Notice* at ¶ 32.

4 *Id*.

5 *Id*. at ¶ 35.

6 For cable VoIP service, the relevant piece of equipment generally is the embedded multimedia terminal adapter (EMTA). In contrast with legacy voice equipment, the Commission's rules do not specify the demarcation point between equipment that is the responsibility of the provider and equipment that is the responsibility of the customer. The EMTA has characteristics of both network equipment, because most often it is provided by the cable operator and communicates with equipment elsewhere in the network, and CPE, because it is located

today's marketplace and technology and the direction in which both are heading. In particular, the Commission should incorporate the following key developments into its analysis:

(1) Cable VoIP customers make the voluntary decision to purchase an IP-based voice service (and expressly acknowledge the powering limitations of that service), rather than purchasing a legacy circuit-switched service;

(2) The overwhelming majority of VoIP customers also purchase mobile voice service;

(3) The overwhelming majority of home telephones are cordless phones that do not work during a power outage;

(4) Uninterruptable power supplies (UPS) that can power multiple devices during a power outage are widely available at national retailers; and

(5) The overwhelming majority of cable VoIP customers decline to purchase a backup battery when it is offered.

In an environment where customers willingly choose IP-based services and have numerous options for ensuring that they retain the ability to make voice calls during a commercial power outage, any mandate on VoIP providers to provide battery backup capability to their customers essentially would operate as a substantial and unnecessary new tax on those customers. When the marketplace is working to provide consumers with options for addressing their needs, mandates of this nature simply raise the cost to consumers. The Commission should decline to take such an approach and instead should focus on informing and educating consumers about their options for staying connected during a power outage and enabling them to choose an approach that meets their needs.

If the Commission does adopt new rules, those rules should reflect the limited role that providers are able to play with respect to CPE. First and foremost, a provider cannot compel a customer to purchase, install, or replace a battery. Ultimate control over all of these steps rests with the customer, not the provider. Furthermore, while equipment vendors continue to work on

within the customer's premises. Following the approach taken in the *Notice*, these comments treat the EMTA, which we also refer to as a modem, as if it is CPE.

improving the capability of CPE, VoIP providers must rely on equipment already deployed in the field and equipment that is available in the marketplace today. Finally, any rule the Commission adopts should acknowledge the significant time and expense attributable to providing customers with backup power capability.

I. REGULATORY MANDATES ARE UNNECESSARY GIVEN THE VARIETY OF OPTIONS AVAILABLE TO CONSUMERS IN THE MARKETPLACE

Cable operators make significant efforts to provide customers with reliable voice service and to offer options for maintaining service during commercial power outages. The Commission should recognize that the marketplace is working to ensure that customers have a range of options to ensure continuity of service during a power outage. Accordingly, the Commission should not adopt the proposal in the *Notice* to place the burden on providers for powering CPE during the first eight hours of an outage, nor should it adopt other proposed regulatory mandates. Instead, the decision whether to purchase a battery or take other steps to ensure continuity of service should be made by individual consumers, not by the Commission.

A. Cable Operators Make Significant Efforts to Inform Consumers Regarding the Availability of Batteries, the Limits of VoIP Service, and the Need for Backup Capabilities

Today cable operators routinely provide information to their customers about the limitations of their service in the event of a power outage, as well as information on the types of batteries available for purchase, if offered. This information is generally provided in several ways, including customer welcome kits, during the service ordering and installation process, or in terms of service agreements and marketing materials.[7] Cable operators further educate their

[7] *See e.g.* Comcast, *Purchase a Battery for Your Xfinity Voice Phone Modem, at* http://customer.comcast.com/help-and-support/phone/getting-a-new-battery/; Comcast, *Battery Help, at* http://customer.comcast.com/help-and-support/phone/troubleshooting-battery-issues-with-digital-voice; Charter, *Charter Phone, Purchasing Battery Backup, at* http://www.myaccount.charter.com/customers/support.aspx?supportarticleid=1351#PurchasingBatteryBackup; Charter, *Important Information about Charter Telephone 911 Services & Battery Back-up, at*

customers by providing FAQs and other disclosures about batteries, including battery model numbers compatible with their modem, where replacement batteries can be purchased, and other support and installation information on their websites.[8]

Furthermore, as required under the Commission's rules, VoIP providers cannot initiate service until they disclose and customers expressly acknowledge the limitations of their VoIP service related to 911.[9] Moreover, at the time service is initiated, cable operators are required to provide a sticker or label for customers to put on or near the modem which states, among other things, that their VoIP service uses home electrical power and that they may not be able to make 911 calls if there is a power outage.[10]

Taken together, these materials make clear to customers that voice services will not work during a power outage without battery backup capability, but that they have options to preserve service during a power outage. Many cable providers have taken on the responsibility to facilitate the ability of the customer to obtain a battery, either by selling batteries or battery-supported equipment or by providing the customer with information regarding where and how to obtain a battery. But the consumer ultimately should be free to make their own choices about whether to use any of these options, including making the choice to purchase or forego backup power for their customer premises equipment.

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https://www.charter.com/browse/content/policies-battery; Cox, *Important Information About The Use of Your Cox Digital telephone Service During a Power Outage, at* http://www.cox.com/aboutus/policies/telephone-modem-battery-policy.cox; Time Warner Cable, *Stay connected even when the power is out, at* http://www.timewarnercable.com/en/support/phone/topics/phone-power-backup.html; Bright House Networks, *Bright House Networks Phone Modem Battery Policy, at* http://brighthouse.com/policies/policies/battery-policy.html.

[8] *See e.g.* Cablevision, *Battery Backup: Maintain Service During a Power Outage, at* http://optimum.custhelp.com/app/answers/detail/a_id/1403/kw/battery%20back%20up; Cox, *Telephone Modem Battery FAQs, at* http://www.cox.com/residential/support/phone/article.cox?articleId=bafbc350-2a0d-11e3-6735-000000000000; Bright House Networks, *Home Phone Modems & Batteries, at* http://support.brighthouse.com/Category/Home-Phone-Modems/.

[9] 47 C.F.R. § 9.5(e)(1).

[10] 47 C.F.R § 9.5(e)(3).

B. Consumers Have Numerous Options to Ensure the Continuity of Voice Service during a Power Outage

For a variety of reasons, there is no basis for placing responsibility for the operation of CPE during a commercial power outage on VoIP providers. First, customer expectations for VoIP in 2015 are not the same as they were with legacy voice service provided over copper lines. For circuit-switched plain old telephone services (POTS) that were the only choice available to consumers for decades, and which are the focus of the *Technology Transitions* proceeding, consumers had a reasonable expectation that service would be available during a power outage. In contrast, our subscribers make a conscious decision to purchase cable VoIP services instead of copper-based POTS and they are informed of the limitations of the service when voice service is initiated. Accordingly, regardless of any requirements the Commission decides to impose when legacy POTS customers are involuntarily transitioned to IP-based services,[11] there is no basis for the Commission to impose mandatory regulation with respect to cable VoIP services.

Second, the vast majority of cable VoIP customers also have a mobile phone, which they rely on to provide redundancy. Currently, 44 percent of the population chooses not to have a landline phone at all.[12] Of those that take landline service, the vast majority typically have mobile service as well. The percentage of U.S. homes that rely exclusively on landline service is less than 10 percent.[13]

Given the large and growing role that mobile services play in consumers' lives, it is no surprise that mobile service is the primary service that most people rely on in an emergency situation. As Commissioner Rosenworcel recently noted, more than 70 percent of 911 calls

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[11] *Notice* at ¶¶ 61 n.157, 94.

[12] Stephen J. Blumberg and Julian V. Luke, Division of Health Interview Statistics, National Center for Health Statistics, WIRELESS SUBSTITUTION: EARLY RELEASE OF ESTIMATES FROM THE NATIONAL HEALTH INTERVIEW SURVEY, JANUARY–JUNE 2014 (Dec. 2014) at 5.

[13] *Id.*

originate from mobile phones.[14] Indeed, the defining characteristic of mobile services – mobility – is particularly important in case of a power outage or other emergency situations. Not only does the mobility of these services and devices mean that customers are able to leave their home during any sort of extended outage, it also means their devices easily can be recharged in cars or other locations that have power. In short, the consumer benefit of providing a battery for VoIP equipment is far less significant to consumers than having a functioning mobile service.

Third, mandating the provision of battery backup capability for VoIP service would have limited benefit due to the prevalence of cordless phones, which depend on commercial power. Any customer that relies exclusively on cordless phones in the home will not have the ability to make a call during a power outage unless the phone itself has a battery backup, regardless of the ability of the VoIP service to function. While we do not know the exact portion of VoIP customers that rely on cordless phones, a quick look at Amazon's page for the "most popular" landline telephones suggests that the majority of new phone purchases are of cordless models that require additional power.[15]

Fourth, mandating battery backup capability for voice equipment is unnecessary due to the widespread availability of standalone Uninterruptible Power Supply (UPS) devices that can power multiple devices in the home during a commercial power outage. Low-cost UPS devices, available from electronics retailers like Best Buy and Amazon, can provide a limited amount of

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[14] *See Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Statement of Commissioner Jessica Rosenworcel (Jan. 29, 2015) at 1 ("The number of wireless calls to 911 is skyrocketing. In fact, more than 70 percent of 911 calls are now made from wireless phones.").

[15] *See* Amazon, Office Electronics: Telephones & Accessories: Landline Phones: Amazon.com, available at http://www.amazon.com/s/ref=sr_in_-2_p_6_3?fst=as%3Aoff&rh=n%3A1064954%2Cn%3A%211084128%2Cn%3A172574%2Cn%3A172606%2Cn%3A5728050011%2Cp_6%3AATVPDKIKX0DER&bbn=5728050011&ie=UTF8&qid=1422553455&rnid=331539011 (last visited Jan. 29, 2015) (showing that of the top 24 models only 1 is corded and does not require external power).

backup power for most devices powered by a standard 120V AC socket.[16] Rather than limiting consumers to a single emergency communications device, commercial UPS devices provide consumers with a flexible source of emergency power. Mobile phone chargers, flashlights, or an emergency radio could all be powered by a UPS device, enabling the consumer to select which device requires power during an emergency.

For all of these reasons, it is not surprising that many of NCTA's member companies have found that most consumers are not interested in purchasing backup batteries from their VoIP service provider. Cable operators have found that the overwhelming majority of residential customers choose not to purchase a battery when it is offered at the time service is initiated. Based on information gathered from some of NCTA's larger members, the percentage of new voice customers electing to purchase a backup battery is not more than three percent, and for some companies it is less than one percent.

In sum, cable VoIP customers know that they are purchasing a service that will not work without a battery during a commercial power outage. Even when companies offer batteries for sale, customers overwhelmingly choose not to purchase them. Instead, they choose to rely on other services, primarily mobile voice, and other equipment, such as UPS devices, that are widely available in the marketplace from numerous sources. Given these facts, a federal rule mandating that providers of VoIP service provide their customers with battery backup capability is unnecessary and unwarranted. If such a requirement applied only to new customers, it would raise the cost of CPE and force all new customers to incur a $30-40 expense for functionality that only a slim percentage choose to pay for today. The cost would be even more significant if a

[16] UPS devices are available in dozens of sizes with a variety of features from top electronics retailers. *See e.g., Amazon: Uninterruptible Power Supply, at* http://www.amazon.com/b/ref=sr_aj?node=764572&ajr=0 (last visited Jan. 29, 2015, *Best Buy – Battery Backup (UPS), at* http://www.bestbuy.com/site/surge-protectors-power-cords/battery-backup/abcat0515043.c?id=abcat0515043 (last visited Jan. 29, 2015),*Newegg.com: UPS, at* http://www.newegg.com/UPS/SubCategory/ID-72 (last visited Jan. 29, 2015).

mandate were applied to existing customers. Not only would millions of cable VoIP customers be required to purchase a battery, in many cases there would be additional costs associated with truck rolls and provisioning new EMTAs, not to mention the time that customers would have to devote to installing a battery or waiting for a cable technician.

C. The Commission Can Promote Consumer Education without Regulatory Mandates

NCTA generally agrees with the Commission that a "comprehensive consumer education plan"[17] could be helpful in ensuring that consumers are not left without voice service during commercial power outages, but the Commission should not impose additional mandatory consumer education requirements on VoIP providers. Given the significant level of competition in the voice marketplace, cable operators have every incentive to provide their customers with a reliable service and to make sure that customers understand the limitations of that service so they are not disappointed by its performance during a power outage. In particular, interconnected VoIP providers currently are required to inform every one of their customers, and obtain an affirmative acknowledgement of this information from each customer, of the potential limitations of accessing E911 service under various scenarios, including power outages.[18] Given this, it is not necessary to impose additional notification requirements on interconnected VoIP providers.

Rather than imposing additional duplicative notice requirements on interconnected VoIP providers, the Commission could promote awareness of the need to plan for power outages through its own direct outreach to consumers, as well as coordinating with state and local government agencies to disseminate communications power information. In fact, the Commission has already compiled helpful information for consumers on how to communicate in

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[17] *Notice* at ¶ 39.

[18] 47 C.F.R §9.5(e).

the event of power outages.[19] The Commission should consider expanding on its existing information and conducting additional outreach to inform consumers of their communications power options.

II. ANY RULES THE COMMISSION ADOPTS SHOULD REFLECT PROVIDERS' LIMITED CONTROL OVER CPE

For the reasons stated above, NCTA does not support the imposition of mandatory requirements on VoIP providers in connection with the powering of CPE. If the Commission nevertheless moves forward with new rules, those rules should reflect the fact that providers have far less control over the configuration of backup customer premises equipment than suggested in the *Notice*.

Any requirement to compel providers to include a battery with every subscription at the time of installation would be ill-advised for a variety of reasons. As noted above, a mandatory obligation to provide customers with a battery would force all customers to pay for equipment that the vast majority of customers currently decline to pay for voluntarily. In addition, such a requirement ignores the fact that some EMTAs do not even include space to install a battery. The availability of such equipment enables providers to reduce the cost of providing service, but a mandate to provide or install a battery at the time service is initiated would essentially prohibit providers from using this equipment. Indeed, not only would companies be precluded from using existing equipment, but a requirement for all CPE to include space for a battery could preclude the development of innovative new equipment.

The most the Commission reasonably can expect is that providers will facilitate a customer's ability to obtain a battery at the time service is initiated, either by providing the

[19] FCC/FEMA Tips for Communicating During an Emergency, Consumer Guide ("FCC/FEMA Consumer Guide"), available at http://transition.fcc.gov/cgb/consumerfacts/emergency-communications-tips.pdf (last visited January 27, 2015).

customer with information regarding where and how to obtain such equipment or perhaps even choosing to sell batteries or providing battery-supported equipment directly to customers. As discussed above, most cable operators already are doing these things today in response to marketplace forces.

Once a customer's CPE is installed and service is initiated, a VoIP provider's ability to ensure that CPE will function during a power outage diminishes over time. For example, monitoring the charge on batteries in residential locations and replacing them if necessary is not always feasible (e.g., if the modem does not have space for a battery), and even when feasible, could present significant costs and practical difficulties for both customers and providers. As explained in the report prepared by Working Group 10B of the Communications, Security, Reliability and Interoperability Council (CSRIC), the most common use case for VoIP is that CPE is inside the home.[20] Because providers do not have unfettered access inside a customer's premises, monitoring or replacing batteries would require the provider to coordinate with the customer. While monitoring of batteries may be feasible in some cases,[21] experience has shown that many customers will not install a replacement battery even if the operator sends it directly to the customer. Requiring providers to send a technician to customers' homes to install replacements, which is what would be required in cases where customers do not install them on their own, could result in significant customer inconvenience, as well as financial and time burdens for providers. Such an approach would be incredibly wasteful given the limited interest

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[20] Communications, Security, Reliability and Interoperability Council IV, Working Group 10B, CPE Powering – Best Practices, FINAL REPORT – CPE POWERING (Sept. 2014) ("CSRIC Report").

[21] *See* CableLabs® Specifications Battery Backup MIB CL-SP-MIB-BB-I04-100608 at 2 ("CableLabs compliant devices that include battery backup with UPS functionality must include a Battery LED that relays information on the status of the UPS and battery pack(s)."), at http://www.cablelabs.com/wp-content/uploads/specdocs/CL-SP-MIB-BB-I04-100608.pdf. CableLabs specifications do not require that devices include battery backup capability, only that monitoring capability exist in devices that include a battery.

consumers have shown in purchasing batteries and their increasing reliance on mobile voice service.

Beyond the installation and maintenance of batteries, the *Notice* also solicits comment on whether VoIP providers should be compelled to limit the type or quantity of traffic allowed through the modem when it is operating on battery power.[22] NCTA has significant concerns with this proposal. VoIP providers cannot control how a phone is used when it is running on battery power, nor do they know which communications are essential to each customer. For example, while it is important for customers to be able to receive emergency alerts, many consumers might feel that calls to and from neighbors and family members are even more important. Similarly, a rule that would require a "default turnoff of all communications services" when the device is in battery mode may prevent consumers from receiving important messages from family and friends. Rather than making the VoIP provider the gatekeeper of a customer's communications during a power outage, the better approach is for the Commission to continue educating consumers on how to extend battery life.[23]

The *Notice* also solicits comment on a variety of questions regarding the capabilities of CPE to operate during a power outage.[24] For example, the Commission asks whether providers should be expected to "standardize CPE power supplies and connector interfaces across network devices and CPE" or offer equipment that relies solely on D-cell batteries.[25] While it is theoretically possible that future CPE could become standardized or simplified, such

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[22] *Notice* at ¶ 34.

[23] FCC/FEMA Consumer Guide at 1 ("If the electricity goes out and you don't need to use the phone right away, you can disconnect the battery to prevent it from draining and plug it back in when you need to receive or make calls. Once the power is restored, plug the battery back in so it can recharge.").

[24] *Notice* at ¶ 38.

[25] *Id.*

developments are speculative and do not provide the basis for current regulation. Providers have spent the capital resources on configuring their network with their equipment of choice. Forced standardization for the limited purpose of powering could thwart beneficial development by diverting significant resources to the replacement of current equipment or provisioning of new equipment. The substantial cost of such a policy would ultimately be borne by consumers for a theoretical benefit that they have already declined.

Looking ahead, the Commission's primary focus should be on equipment vendors in assessing and promoting these developments. While VoIP providers certainly can attempt to work with their network device and CPE vendors as recommended in a number of the best practices contained in the CSRIC Report, VoIP providers do not manufacture their own equipment and cannot be held responsible for the success or failure of such efforts. Prescribing a power standard for devices that are evolving rapidly and have many different combinations of functions and power requirements has the potential to harm innovation and harm consumers. The Commission should continue to monitor developments in this area through the CSRIC process, but at this time there is no basis for imposing any sort of mandatory obligation on VoIP providers.

CONCLUSION

In today's marketplace, consumers have numerous options for the provision of voice service and numerous ways to ensure that they have the capability to make voice calls during a commercial power outage. Mandating that providers of VoIP service provide all customers with battery backup capability would impose an unnecessary and wasteful "battery tax" on consumers. The better approach is for the Commission to work with VoIP providers on identifying network best practices and assisting with consumer education to ensure that all customers have the information they need to determine how best to stay connected when the power goes out.

Respectfully submitted,

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